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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHANG, AUDREY Y

ART UNIT PAPER NUMBER

2872

DATE MAILED: 07/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/055,890

Applicant(s)

HONG, HYUNG KI

Examiner

Audrey Y. Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 2-9 are rejected under 35 U.S.C. 112, first paragraph**, as based on a disclosure which is not enabling, the *corresponding complementary color coding of the left eye and right eye perspective image* with respect to the color arrangement of the variable color barrier and the corresponding complementary color coded vision aids are **critical or essential** to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. If the color coded vision aids are not used then the specification and the claims must show the correspondence between the color coding of the images and the color coding of the color barrier in order for the right eye image to go to right eye only and the left eye image to go to left eye only. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The specification and claims fail to teach how could the stereoscopic image be observed by simply having a variable color barrier. Claims 3-6 and 8-9 inherit the rejections from their respective based claims.

3. **Claims 7-9 are rejected under 35 U.S.C. 112, first paragraph**, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was **not** described in the specification in such a way as to **enable** one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification and the claims fail to teach how could the stereoscopic image be observed by having color barrier and a *light scattering device*. Claim 7 fails to disclose an operable device since the image displaying apparatus as described therein is *not capable* of providing stereoscopic image display.

Claims 8-9 inherit the rejections from their based claims.

Claim Objections

4. Claims 2-9 are objected to because of the following informalities:

(1). The phrase “for taking advantage of a light inputted from the light source” recited in claims 2 and 7 is confusing and indefinite since it is not clear what is the *advantage* and what is the *limitations* concerning the “advantage” that is sought for patent. *The applicant is respectfully noted the claims (2 and 7) fail to disclose the structural and logical relationship between the light source, the display device and the image signal converter, which makes the claims incomplete, confusing and indefinite.*

(2). The phrase “a variable color barrier for separating a picture ... into left-eye picture and right-eye picture” recited in claim 2 is wrong since the color barrier can only block or transmit an image but it cannot perform image processing to “separate” the image into left-eye and right-eye picture.

Claims 3-6 and 8-9 inherit the objections from their respective based claims. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Isono et al (PN. 5,315,377).**

Isono et al teaches a three-dimensional image display that is comprised of a *liquid crystal display panel* (46) serves as the display device to display a picture according to image signals and *electrically generates parallax barrier strips* on a *parallax barrier panel* (28) such that the size and the number of the

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barrier strips may be adjusted so that they interfere with the image light transmitted from the display panel (46) to display the image either in a *two dimensional mode* (2D) or in a *three-dimensional mode* (3D), (please see Figures 1-2 and columns 1-5). Isono et al teaches in the 3D mode the barrier strips direct the right eye perspective image to the right eye of an observer and the left eye perspective image to the left eye, to create stereoscopic illusion to the observer, (please see Figure 2).

This reference does not teach explicitly that the image signals are obtained by photographing an object at a different angle on a display unit. However such method is the most common practice in the art to obtain parallax images of an object. It would then have been obvious to one skilled in the art to modify the method accordingly to obtain the parallax images of the object photographically for the displaying of stereoscopic image.

5. Claims 2-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Hamagishi et al (PN. 5,751,479).

The claims as indicated in the paragraphs fail to provide adequate writings for describing a workable apparatus or for providing the enablement of the apparatus; they can only be examined in the broadest interpretation.

Hamagishi et al teaches a *three dimensional display* that is capable of being switched between stereoscopic mode and 2D display mode, wherein the apparatus is comprised of a *liquid crystal display device* (1, Figure 7) serves as the image display device, a *light source* (2) and a *color filter* (3), comprises different filtering regions that each filters light in complementary color, and a polymer dispersed liquid crystal panel (17), wherein the color filter and the polymer dispersed liquid crystal panel serve together as the *variable color barrier*. Hamagishi et al teaches when the polymer dispersed liquid crystal panel is switch on the color filter with the panel is switched to stereoscopic mode for directing and separating the image displayed on the liquid crystal display in such a way that left eye image reaches left eye of an

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observer and the right eye image reaches the right eye of the observer to create stereoscopic image display. When the LCD panel (17) is switched off the light from the color filter is combined to white light such that a 2D image display mode is presented, (please see Figures 7-8 and columns 7-8).

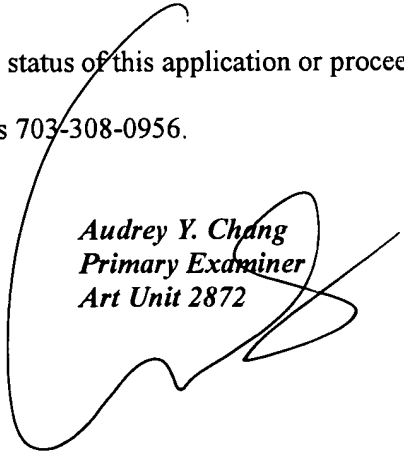
Hamagishi et al teaches that the color filter can either be placed in front of the backlight or in front of the display device. This reference does not teach explicitly that the image signals are obtained by photographing an object at a different angle on a display unit. However such method is the most common practice in the art to obtain parallax images of an object. It would then have been obvious to one skilled in the art to modify the method accordingly to obtain the parallax images of the object photographically for the displaying of stereoscopic image.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 703-305-6208. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 703-305-0024. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Audrey Y. Chang
Primary Examiner
Art Unit 2872



A. Chang, Ph.D.
July 22, 2003